GMA

Representing the Makers of the World's Favorite Food, Beverage and Consumer Products

Industry's Product R&D Process, Alternatives Analysis!

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GMA Science Policy – Chemical Safety

GREEN CHEMISTRY

Purpose of AA III Symposium

Share industry best practices to:

- Facilitate understanding of the product R&D process;
- Demonstrate how safety is core to product design, protecting Californians' health and environment;
- Leverage evidence-based assessments to form the basis of an effective AA regulatory framework.

Who We Are

GMA
The Association of Food, Beverage and Consumer Products Companies

Personal Care Products Council
Committed to Safety, Quality & Innovation

CSPA®
Consumer Specialty Products Association

Toy Industry Association, Inc.
www.toyinfo.org

ACI
american cleaning institute℠
for better living

Overarching Policy Goal

California Department of
Toxic Substances Control

AB1879 Green Chemistry objectives are to:

- SIGNIFICANTLY reduce adverse health and environmental impacts of chemicals used in commerce
- SIGNIFICANTLY reduce the overall costs of those impacts to the state's society
  - by encouraging the redesign of consumer **products**, manufacturing **processes**, and **approaches**

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California Green Chemistry Initiative AA Statutory Requirements

AB1879 – Sec 25253

- (a)(1) "…[E]stablish a **process for evaluating chemicals of concern** in consumer products, and their potential **alternatives**, to determine how best to *limit exposure* or to *reduce the level of hazard* posed by a chemical of concern…"
- (a)(2) "…[E]stablish a **process** that includes an **evaluation of the availability** of potential **alternatives** and *potential hazards posed by those alternatives*, as well as *an evaluation of critical exposure pathways*…"

California Green Chemistry Initiative

AB1879 – Sec 25253

(a)(2) "This process shall include life cycle assessment tools that **take into consideration**, but shall not be limited to,…"

- A- Product function or performance
- B- Useful life
- C- Materials and resource consumption
- D- Water conservation
- E- Water quality impacts
- F- Air emissions
- G- Production, in-use, and transportation energy inputs
- H- Energy efficiency
- I- Greenhouse gas emissions
- J- Waste and end-of-life disposal
- K- Public health impacts, …to sensitive subpopulations (infants and children)
- L- Environmental impacts
- M- Economic impacts

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Toxic Substances Control

AB1879 – Sec 25253

(c) The department … shall ensure that the tools available are in a form that allows for ease of use and transparency of application … devise simplified and accessible tools that consumer product manufacturers, consumer product distributors, product retailers, and consumers can use to make consumer product manufacturing, sales, and purchase decisions.

What you will hear TODAY …

- **AA is fundamental to product R&D process and design:**
  - Product R&D focuses on choices and opportunities, stimulating innovation
  - Product R&D is a "solutions-oriented" approach
  - Product R&D considers all risk reduction opportunities
  - Informed decision making: Avoid unintended consequences
  - Stewardship is part of our culture
- **Product safety is always a given**
- **Consumer preference drives innovation**
  - Our products must meet consumer need (accessibility to safe, quality and affordable products);
  - Our products improve quality of life
- **Product optimization process is iterative, complex, and done case-by-case.**
  - Cannot be a one-size-fits-all approach;
  - Adequate time is necessary to develop and implement new products in the marketplace

What you will hear TODAY …

Key factors always considered in the product R&D/AA process that meet and exceed CA's 13 A-M Statutory Criteria:

- Consumer preference/acceptance
- Safety (health + environment)
- Product performance
- Lifecycle considerations
- Manufacturability (Availability, Capability, Compliance)

Multi-Factorial Evaluation Matrix
CA Statutory A-M and Other Criteria

Companies consider ALL of these factors within the Product R&D process

(i) Safety (human and environmental)

(K)-Public Health Impacts, incl. sensitive subpopulations
(L)-Environmental Impacts
(E)-Water quality impacts
(F)-Air emissions
(I)-GHG emissions
(J)-Waste/End-of-Life Disposal
-Toxicological endpoints
-Physicochemical properties

(ii) Performance and Value

(A)-Product function/performance (to include compatibility)
(B)-Useful Life
(M)-Economic impact
-Consumer Acceptance

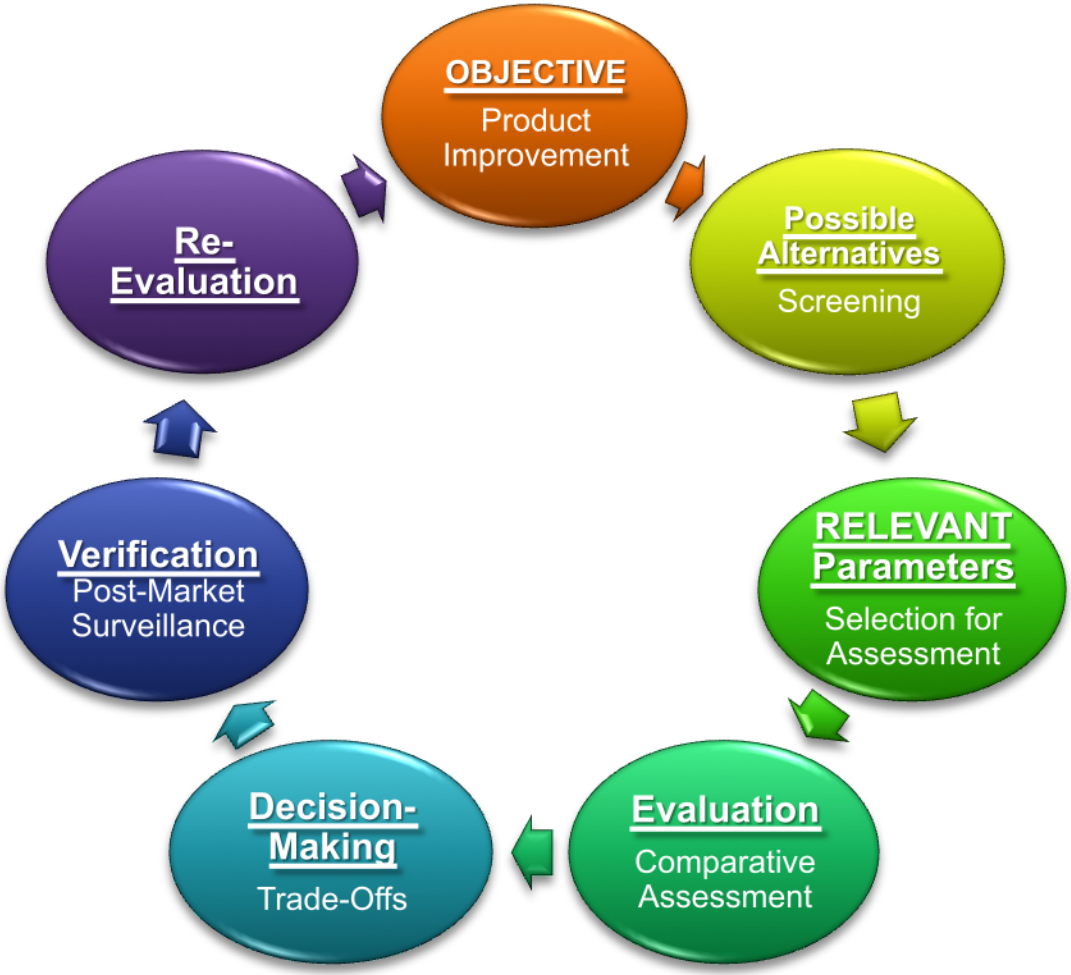
(iii) Lifecycle/Resource utilization

(C)-Material/Resource Consumption
(D)-Water conservation
(G)-Energy inputs (Production, In-use, and transportation)
(H)-Energy efficiency

(iv) Other

-Availability/sourcing
-Manufacturing capability
-Regulatory compliance

Product R&D Process – Continuous Improvement



Overview/Agenda

- Product Safety, Material R&D Assessments, Product Stewardship
- Innovation, Trade-offs and Avoiding Unintended Consequences
- Product R&D Case Studies
  - Household
  - Cleaning
  - Personal Care
  - Lifecycle Thinking
  - Toys
- Concluding Remarks

Let's Begin!

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